

SSC QUADRUPOLE MAGNET PERFORMANCE AT LBL.

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All magnets exceeded SSC-acceptable training requirements, although all magnets required training to reach "plateau" (~8000A). All magnets also had to be retrained after being warmed to room temperature, although subsequent trainings were often quicker. Quench-fronts were observed to propagate between 8-11 m/s, increasing as the plateau was approached. All quenches originated in the pole turn except those under fast ramp conditions. Quench-initiation patterns were generally unique for each thermal cycle and for each magnet.

Strain gage measurements indicate hysteretic behavior of azimuthal stresses in the coils as the magnets are cycled.

Magnetic quality generally improved with experience and was well within the SSC rms specifications for the last two magnets.

1. Category 3.
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4. Oral session.